

THE GENUS XEROPHLOEA GERM.

(Homoptera, Cicadellidae).

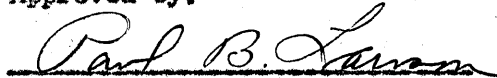
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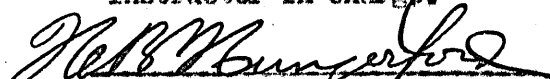
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THE GENUS XEROPHLOEA GERM.

(Homoptera, Cicadellidae.)

The genus *Xerophloea* differs from the other members of the subfamily Gyponinae in having a broad flat vertex separated from the front by thin margins. The whole upper surface is coarsely pitted and the wings extend more vertically than in the other genera of this subfamily.

Distribution: The only well known species, veridis, is found practically throughout the United States. Major is less well known and occurs seemingly in the eastern half of the United States. The five new species described in the paper are practically all from the southwest.

Hosts: Practically nothing is known as to the specific host of the members of the genus. In general they are found in meadows and pastures and are thought to be grass feeding leafhoppers.

Specific Characters: The species of the genera are rather hard to separate because of two difficulties. First, the differences between what are undoubtedly separate species are not striking as in many genera of leafhoppers. The external genitalia, for instance, are practically the same in all members of the genus, and except for kansasensis, the internal male genitalia show only minute differences. The same difficulties hold

with regard to the shape of the vertex and color helps very little for the females are nearly all uniformly green and the males green or brownish. In the second place some of the usual characters used in the separation of leafhoppers, show a good deal of variation within the species in the genus. This is particularly true of the vertex which varies rather remarkably in relative length and width and in the rounding or angulation of the anterior margin. However, most of the members of a species will have the vertex fairly characteristic of the species and will show fairly definite general differences from the vertex in any other species.

Key to Species

A. Front of head distinctly inflated.

B. Front of head very strongly inflated (see fig.____)
inflata sp. n.

BB. Front of head moderately inflated (see fig.____)
neomexicana sp. n.

AA. Front of head at most but slightly inflated.

B. Vertex very broadly rounded; large species 9 mm. in length. major. Bak.

BB. Vertex usually somewhat angled; smaller species not over 8 mm. in length.

C. Larger species, 6 mm. or over in length.

D. Head very flat; 7-8 mm. long. Kansasensis sp. n.

DD. Head not so flat; somewhat smaller.

E. More robust species; males 6.5 mm. long.
mississippiensis sp. n.

EE. More slender species; males 6 mm. long
viridis (fabr.)

CC. Smaller species, under 6mm. in length. minor sp. n.

XEROPHLOEA VIRIDIS (Fabricius)

Cercopis viridis Fabr., Ent. Syst., iv. p. 50, 1794.

Xerophloea viridis Stal, Hemip. Fabr., ii, p. 59, 1869.

Fairly elongate species, green to grayish in color, varying in length from 5.75 mm. in the smaller males to 7 mm. in the larger females.

Form: Vertex twice as wide as long, about twice as long at middle as next the eyes, margin usually angular. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from the side flat or slightly inflated. Pronotum one and one-half times longer than vertex, almost twice as wide as long, broadest at caudo-lateral angles; anterior margin strongly convex, humeral margins longer than lateral margins, roundly angled to concave posterior margin. Elytra moderately broad and long, rounded at tip, exceeding abdomen by about one-fifth of their length.

External genitalia: Female last ventral segment very long, posterior margin forming two large rounded lobes, with narrow median incision to base; pygofer slightly exceeded by ovipositor. Male valve large, slightly broader than long, truncate at tip; plates long and slender, rounded apically, exceeding short pygofer.

Internal male genitalia: Styles with large club-shaped basal portion, then narrowed suddenly past middle, apical portion gradually widened to fairly wide rounded apex with distinct tooth near tip on mesal margin, and line from this tooth to apex slightly concave. Oedagus, viewed laterally, with curved finger-like basal process separated by a distinct notch from the triangular main body, tip of later narrowly pointed and slightly upturned. Connective triangular in shape, apex bluntly pointed, lateral margins slightly incurved.

Color: Female bright green, elytra somewhat faded apically, two or three brown spots of appendix. Males bright green to dirty yellowish green or light brown, vertex with median brown stripe extending to pronotum with disk and posterior margin brown, occasionally with brown markings on veins and margins of elytra. Eyes of both sexes light to dark brown.

Distribution: Specimens are at hand from Kansas, New Mexico, and Colorado. Van Duzee's catalogue lists in addition: Massachusetts, New York, New Jersey, Maryland, Georgia, Florida, Mississippi, Tennessee, Utah, Texas, California, Washington, and Oregon. Therefore, evidently, this species occurs throughout the United States.

XEROPHLOEA MAJOR Bak.

Baker, Psyche, viii, p. 285, 1898.

Following is the original description:

Length 7.5 mm., width across pronotum 2.5 mm. Larger, more robust, and more coarsely pitted than viridis. The vertex proportionally much larger than in viridis, and broadly, evenly rounded in front, nor at all even sub-angulate.

Described from two females in National Museum, collected by E. A. Schwartz in Virginia. In National Museum there is also a specimen from Fitch Cabinet, bearing the label "Xerophloea major, Arkansas, W. S. Robertson".

The writer submits this description of a female specimen.

Decidedly larger with distinctly more rounded vertex than viridis, female green in color, 9 mm. in length.

Form: Vertex one and one-half times wider than long, three times as long at middle as next the eyes, margin broadly rounded. Ocelli nearer to posterior than anterior margin, closer to eyes than to each other. Front as wide as long, broadest at caudo-lateral angles; roundly angled to posterior concave margin. Elytra very broad and short exceeding abdomen by one-sixth of their length.

External genitalia: Female last ventral segment about twice as long as preceding lobes of posterior margin angled caudo-laterally instead of rounding as in viridis. Pygofer short one and one-half times length of last ventral segment.

Color: Female green, somewhat faded, few brown markings on appendix of wing. Eyes light to dark brown.

Distribution: Specimen at hand from Cherokee County, Kansas. Van Duzee's catalogue lists in addition: New York, New Jersey, Virginia, Tennessee.

XEROPHLOEA MISSISSIPPIENSIS sp. n.

Broader and with relatively shorter elytra than viridis, male, brown in color, 6.5 mm. in length.

Form: Vertex twice as wide as long, not quite twice as long at middle as next the eyes, margin broadly angular. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from side flat. Pronotum one and one-half times longer than vertex, nearly twice as wide as long, broadest at caudo-lateral angles; anterior margin not as strongly convex as in viridis, humeral margins longer than lateral margins, roundly angled to slightly concave posterior margin. Elytra broad, exceeding abdomen by about one-fourth their length.

External genitalia: Very similar to viridis.

Internal male genitalia: Tooth on mesal margin of apical portion of style more pronounced than in viridis, and line from this tooth to apex slightly more concave. Oedagus larger than in viridis and tip more broadly pointed.

Color: Males light brown, vertex with median brown stripe extending to pronotum, and with two brown spots at base one on either side of median line; pronotum with two brown strips on disk and with regular brown mottlings along anterior and posterior thirds, elytra with short dark brown markings on veins

and margins. Eyes reddish brown.

Holotype: Male, vicksburg, Mississippi, taken by
C. J. Drake, 6-18-21.

Types in the Snow Entomological Collection, University
of Kansas.

XEROPHLOEA NEOMEXICANA sp. n.

Slightly shorter more robust than viridis, green to brown in color, varying in length from 5.5 mm. in smaller males to 6.75 mm. in larger females.

Form: Vertex twice as wide as long, about twice as long at middle as next the eyes, margin usually angular. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from side moderately inflated. Pronotum twice as long as vertex, about one and one-half times as wide as long, broadest at caudo-lateral angles; anterior margin more strongly convex than viridis, humeral margins longer than lateral margins, roundly angled to posterior concave margin. Elytra broad, rounded at tip, exceeding abdomen by about one-fifth of their length.

External genitalia: Similar to viridis.

Internal male genitalia: Apical portion of styles having moderately round apex, with tooth of mesal margin not as large as in inflata, and line from this tooth to apex slightly concave. Oedagus short and stout with apex obtusely pointed and slightly upturned.

Color: Female bright green, two or three brown spots on the appendix. Males light brown, vertex with median brown stripe extending to pronotum, pronotum having median line of

vertex continued on anterior portion, posterior portion darker brown, scutellum with a large brown spots, elytra with short brown lines on veins and margins and longer one on claval suture. Eyes of both sexes light to dark brown.

Holotype: Male, Chaves County, New Mexico, taken by R. H. Beamer, 7-8-27.

Allotype: Female, Chaves County, New Mexico, taken by R. H. Beamer, 7-8-27.

Paratypes: Male, Navajo County, Arizona, taken by R. H. Beamer, 8-15-27.

Female, Mescal, Arizona, taken by R. H. Beamer, 7-28-27.

Female, Yavapai County, Arizona, taken by R. H. Beamer, 8-9-27.

Types in the Snow Entomological Collection, University of Kansas.

XEROPHLOEA KANSASENSIS sp. n.

Distinctly larger and with longer vertex than viridis, dull green to brownish in color, varying in length from 7 mm. in the males to 8 mm. in the females.

Form: Vertex one and one-third times wider than long, almost three times as long at middle as next the eyes, margin in female distinctly angulate. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from side very flat, the whole head being more strongly flattened than any other member of genus. Pronotum slightly longer than vertex, one and one-half times wider than long, broadest at caudo-lateral angles; anterior margin not as convex as in viridis, humeral margins slightly longer than lateral margins, roundly angled to slightly concave posterior margins. Elytra broad and long, rounded at tip, exceeding abdomen by one-fifth their length.

External genitalia: Very similar to viridis.

Internal male genitalia: Basal portion of styles unique in not being club-like but consisting of short pointed processes, posterior half much larger than in viridis, the tooth on the mesal margin more pronounced and the line from this tooth to the apex more concave. Tip of oedagus more moderately pointed and straighter.

Color: Female pale green, elytra somewhat faded apically,

two or three brown spots on appendix. Males green, elytra faded, vertex with median brown stripe extending to pronotum, pronotum with anterior and posterior portions spotted with brown, elytra usually with short brown markings on veins and margins. Eyes of both sexes light to dark brown.

Holotype: Female, Greenwood County Kansas, taken by Beamer and Lawson, 8-2-23.

Allotype: Male, same data.

Paratype: Female, same data.

Types in Snow Entomological Collection, University of Kansas.

XEROPHLOEA INFLATA sp. n.

Distinctly shorter and with decidedly more inflated face than viridis, green to brownish in color, varying in length from 5.5 mm. in smaller males to 6.75 mm. in the larger females.

Form: Vertex twice as wide as long, about one and one-half times as long at middle as next the eyes, margin usually rounded. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from side very strongly inflated. Pronotum almost twice as long as vertex, not quite twice as wide as long, broadest at caudo-lateral angles; anterior margin more convex than viridis, humeral margins longer than lateral margins, rounded to posterior slightly concave margin. Elytra broad, rounded at tip, exceeding abdomen by about one-fourth their length.

External genitalia: Similar to viridis.

Internal male genitalia: Apical portion of styles with produced, narrowly rounded apex, with very distinct tooth on mesal margin, line from this tooth to apex strongly concave. Oedagus similar to viridis.

Color: Female pale green, elytra somewhat faded apically, two or three brown spots on appendix. Males yellowish light brown, vertex with very slight brown stripe along median line extending to

pronotum, pronotum with disk and posterior portion darker brown, brown spot on clavus along elytral suture. Eyes of both sexes light to dark brown.

Holotype: Male, Tuscon, Arizona, taken by A. A. Nichol, 6-21-24.

Allotype: Female, Tuscon, Arizona, taken by A. A. Nichol, 6-7-24.

Paratypes: A male, Tuscon, Arizona, taken by A. A. Nichol, 6-7-24. A. Female, Tuscon, Arizona, taken by A. A. Nichol, 6-7-24. 4 Females, Yavapai County, Arizona, taken by R. H. Beamer, 8-9-27.

Types in the Snow Entomological Collection, University of Kansas.

XEROPHLOEA MINOR sp. n.

Distinctly smaller than viridis, male brown in color, 4.5 mm. in length.

Form: Vertex almost twice as wide as long, slightly over twice as long at middle as next the eyes, margin angular. Ocelli nearer posterior than anterior margin, closer to eyes than to each other. Front as seen from side flat or slightly inflated. Pronotum one and one-half times longer than vertex, one and three-fourths times wider than long, broadest at caudo-lateral angles; and anterior margin strongly convex, humeral margins longer than lateral margins, roudnly angled to posterior concave margin. Elytra broad, rounded at tip, exceeding abdomen by about one-fifth their length.

External genitalia: Similar to viridis.

Internal male genitalia: tooth near tip on mesal margin of apical portion of styles more pronounced than in viridis, line from this tooth to obtusely rounded apex, strongly concave. Oedagus similar to viridis.

Color: Male light brown, vertex with broad median stripe extending slightly past anterior margin of pronotum, pronotum with two stripes on disk, and posterior portion darker, elytra with short lines on veins and margins and with two or three brown spots on appendix.

Holotype: Male, Biloxi, Mississippi, taken by C. J. Drake, 8-4-21. Types in Snow Entomological Collection, University of Kansas.

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